

REMARKS/ARGUMENTS

Claims 1, 4, 5-7, 9, 10, 20, 23, 33, and 38 are amended, and claims 45-61 are newly added. Claims 1-61 are now pending in the application. Applicants respectfully request reexamination and reconsideration of the application.

Claims 1-4, 20, 21, and 33-40 were rejected under 35 USC § 102(b) as anticipated by U.S. Patent No. 6,236,223 to Brady et al. ("Brady"). Applicants respectfully traverse this rejection.

Independent claim 1 is directed to a "method of testing" and includes the step of "transmitting test data wirelessly from [a] tester to [a] test station" and "testing [an] electronic device . . . at said test station." The transmitted test data represents "*a plurality of tests*," which are run "on said electronic device at said test station."

In contrast, Brady's tester 228 generates only one signal—an RF interrogating signal—that is transmitted to fixture 216 and input to an RFID IC 212 through probe 218. In response to the RF interrogating signal, the RFID IC 212 generates one signal—an RF return signal—that is transmitted by fixture 216 to tester 228, where tester 228 determines whether the RF return signal is correct. (Brady col. 5, lines 22-42.) In the Office Action, the RF interrogating signal was equated with the test data of claim 1. At best, the RF interrogating signal results in only one test being run on an RFID IC 212; namely, determining whether a proper RF return signal is generated. Without question, the RF interrogating signal does not represent "a plurality of tests" run on the RFID IC 212, as would be required to meet the features of claim 1. Brady therefore does not anticipate claim 1.

Nor does Brady render claim 1 obvious. Nothing in Brady teaches or suggests the desirability of providing test data via wireless link 124 for running multiple tests on an RFID IC 212. Indeed, the real purpose of the wireless link 124 in Brady is to provide an RF environment in which to test the RFID IC's ability to generate a return RF return signal in an RF environment. (Brady col. 1, lines 34-60.) Brady thus provides no teaching, suggestion, or reason to modify the tester 228 to provide test data via wireless link 124 for testing anything other than an RFID IC's ability to generate a proper return RF signal. In addition, Brady lacks any teaching or guidance as to how to modify the tester 228 to generate and the fixture 216 to process test data for running multiple tests on an RFID IC 212.

Moreover, claim 1 represents a significant advance in the testing arts and provides advantages not found in any prior art testing system. For example, the tester may be located a great distance from the test station and yet provide sufficient data for thoroughly testing semiconductor dies (e.g., memory dies). As another example, even if the tester is not located a great distance from the test station, cumbersome cables need not be used to connect a tester to a test station. Indeed, a tester configured to provide test data to one test station is readily and easily reconfigured to provide test data to a different test station without the need to change cable connections between the tester and the test stations. Thus, the testing method of claim 1 is not trivial but represents a significant and advantageous advance in the art.

For all of the foregoing reasons, independent claim 1 is patentable over Brady.

Independent claims 20 and 33 also include a requirement regarding running a plurality of tests on an electronic device. Brady therefore also fails to anticipate or render obvious independent claims 20 and 33.

Claims 2-4, 21, and 34-40 depend from one of claims 1, 20, or 33 and are therefore also patentable over Brady. Claims 2-4, 21, and 34-40 also recite additional features not taught or suggested by Brady.

For example, claim 4 states that "said test data comprises commands and said step of testing an electronic device comprises said test station executing said commands and thereby running said plurality of tests on said electronic device." Brady's RF interrogation signal does not represent even one command—much less multiple commands—that is executed at the fixture 216. As expressly stated in Brady, the RF interrogation signal is received by antenna 220 and conducted through cable 224 and probe 218 directly to an RFID IC 212. (Brady col. 3, lines 38-40. The RF interrogation signal is not processed by the fixture 216 in any way prior to being directed into the RFID IC 212 and therefore does not represent even a single command—much less multiple commands. Brady therefore fails to teach or suggest the additional features of claim 4.

As another example, claim 35 states that "receiving means further comprises means for receiving test data from a plurality of testers." In the Office Action, testers 228 were equated with the testers of claim 35, and antenna 222 was equated with the receiving means of claim 35. As shown in Figure 2D of Brady, however, no antenna 222 is configured to receive any type of data from more than one tester 228; rather, each antenna 222 is configured to receive an RF

interrogation signal from one and only one tester 228. Brady therefore fails to teach or suggest the additional features of claim 35.

As yet another example, claim 36 requires testing an electronic device using first test data received from a first tester and testing "*said* electronic device" (i.e., the same electronic device) using second test data received from a second tester. In Brady, an RF interrogation signal received at one fixture 216 from one tester 228 is used to test one RFID IC 212 and an RF interrogation signal received at another fixture 216 from another tester 228 is used to test *another*—not the same—RFID IC 212. In fact, Brady states that the system shown in Figure 2D will not work unless the wireless links between each pair of a fixture 216 and a tester 228 are electrically shielded such that one fixture 216 can communicate with only one tester 228. (Brady col. 5, lines 13-21.) Brady thus fails to teach or suggest the additional features of claim 36.

As still further examples, claim 39 recites "means for wirelessly transmitting a request to said tester to configure the tester to transmit test data to said test station," and claim 40 recites "means for wirelessly transmitting a request to said tester to configure the tester to stop transmitting test data to said test station." Although the Office Action refers to Figure 2D of Brady, neither Figure 2D nor the written description of Figure 2D (nor any other part of Brady) discloses anything for transmitting a request from a fixture 216 to a tester 228 to start or stop transmitting RF interrogation signals.

Claim 5 was rejected under 35 USC § 103(a) as obvious in view of Brady and U.S. Patent No. 5,539,325 to Rostoker et al. ("Rostoker"), and claims 6-19, 22-32, and 41-44 were rejected under 35 USC § 103(a) as obvious in view of Brady and U.S. Patent No. 6,137,303 to Deckert et al. ("Deckert"). Applicants respectfully traverse these rejections.

Claims 5-19, 22-32, and 41-44 depend from one of claims 1, 20, or 33 and are therefore also patentable. More specifically, as discussed above, Brady fails to teach or suggest all of the features of claims 1, 20, and 33. Neither Rostoker nor Deckert make up for those deficiencies in Brady. Therefore, claims 5-19, 22-32, and 41-44 are patentable over Brady whether taken alone or in combination with Rostoker or Deckert.

Moreover, there is no suggestion or motivation that would lead a person skilled in the field to combine Rostoker or Deckert with Brady. As discussed above and acknowledged in the Office Action, Brady is directed to transmitting an RF interrogation signal to an RFID IC 212 to determine whether the RFID IC 212 generates a proper RF return signal. The purpose expressly

stated in Brady for using RF transmission is to provide an RF environment, which is the environment in which the RFID IC 212 will actually be used, in which to test the RFID IC. According to Brady, testing the RFID IC 212 in an RF environment—that is, the environment in which the RFID IC 212 will actually be used—improves the reliability of the tests. (Brady col. 1, lines 34-60.)

In contrast, neither Rostoker nor Deckert teach or suggest the use of or the need for an RF testing environment. Indeed, neither Rostoker nor Deckert provide even the slightest hint that an RF testing environment would in any way enhance or improve the reliability of tests performed in those references. There is, therefore, no reason to use Brady's RF methodology in a system like Rostoker or Deckert that has nothing to do with the use of RF technology and does not teach or suggest testing an RF device.

In addition, claims 5-19, 22-32, and 41-44 recite additional features that are not taught or suggested by Brady, Rostoker, and/or Deckert.

For example, claim 5 states that the "electronic device comprises self-test circuitry and the "test station initiat[s] operation of said self-test circuitry." Rostoker discloses nothing more than the long known use of self-test circuitry on an electronic device. Such a disclosure does not, however, teach or suggest the wireless transmission of a command to a test station that causes the test station to initiate operation of self-test circuitry on an electronic device being tested at the test station, as required by claim 5 (which depends from and thus includes the features of claims 4 and 1). The prior art of record therefore does not teach or suggest claim 5.

As another example, claim 8 states that "test data transmitted to at least one of said test stations is different than test data transmitted to another of said test stations." The Office Action cites the controller 25 of Deckert as meeting the requirements of claim 8. Controller 25, however, does nothing more than move carousel 21. (Deckert col. 6, lines 13-16.) Controller 25 has nothing to do with the transmission of data much less meets the requirement that "test data transmitted to at least one of said test stations is different than test data transmitted to another of said test stations." The prior art of record thus does not teach or suggest claim 8.

As yet other examples, claim 11 includes the step of "adding another test station to said test system," and claim 12 states that the "another station" to be added "transmit[s] wirelessly to said tester a request to be added to said test system." Neither Brady nor Deckert teach or suggest a step in which a new test station is added to a test system much less the new test station

wirelessly transmitting a request to be added to the test system. The prior art of record thus does not teach or suggest claims 11 or 12.

As still another example, in claim 13, a first tester transmits first test data to a test station, which uses the first test data to test an electronic device. In addition, a second tester transmits second test data to "*said* test station" (i.e., the same test station that received the first test data), which uses the second test data to test further "*said* electronic device" (i.e., the same electronic device tested using the first test data). Neither Brady nor Deckert teaches or suggests sending first test data from a first tester to a test station to test an electronic device and sending second test data from a second tester to the *same* test station to test the *same* electronic device as required by claim 13. The prior art of record therefore does not teach or suggest claim 13.

Claim 27 includes "means for signaling another tester that results of testing have been received from said test station," and claim 28 includes "means for receiving a signal from another tester that testing of said electronic device by said other tester is completed, wherein said initiating means initiates said testing in response to said signal from said other tester." Neither Figure 2D of Brady nor Figure 1 of Deckert discloses such features. That is, as shown in Figure 2D of Brady, testers 228 do not communicate with each other, and in fact, Brady states that the system will not work unless testers 228 are shielded from each other. (Brady col. 5, lines 13-21.) Deckert likewise fails to disclose the signaling recited in claim 27 or claim 28. The prior art of record thus also does not teach or suggest claims 27 and 28.

New claims 45-55 depend from one of claims 1, 20, or 33 and therefore are patentable over the prior art of record. The prior art of record also fails to teach or suggest the features recited in claims 45-55.

New independent claim 56 is directed to "a method of testing in a system comprising a tester and a test station." "Test directives" are wirelessly transmitted from the tester to the test station, and a test is run on an electronic device at the test station in accordance with the test directive. Both of dependent claims 57 and 58 state that the test directive is a command. Claim 57 states that the command is decoded, and claim 58 states that the command is executed. Claim 59 states that the "test directive comprises a test vector comprising data and locations to which said data is to be written," and claim 60 states that the "locations comprise identifications of probes through which said test data is to be written to said electronic device." Claim 61 describes transmitting a plurality of such test directives.

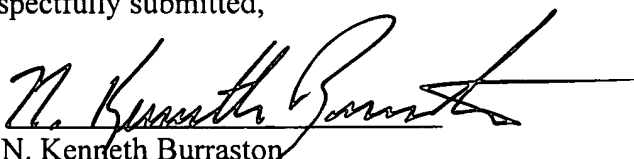
Brady does not teach or suggest the features of independent claim 56 or any of dependent claims 57-61. As discussed above, Brady's RF interrogation signal is nothing more than a simple RF signal that is funneled directly to an RFID IC 212. Such an RF signal is not a "test directive" that corresponds to a test run on an electronic device, as required by independent claim 56. Nor does Brady's simple RF interrogation signal correspond to a command that is decoded or executed at fixture 216 (which was equated with the test station of the claims of the instant application). (Compare with claims 57 and 58.) Certainly, Brady's RF interrogation signal is not a "test vector compris[ing] data and locations to which said data is to be written," as required by claim 59, nor does the RF interrogation signal include "identifications of probes through which said test data is to be written to said electronic device," as required by claim 60. Indeed, because the RF interrogation signal is funneled directly through probe 218 into the RFID IC 212, there is no need to include any data with the RF interrogation signal that identifies a location in the RFID IC 212 to which the RF interrogation signal is to be written. There is likewise no reason to send more than one RF interrogation signal to an RFID IC 212. (Compare with claim 61.)

For all of the foregoing reasons, Brady does not teach or suggest the features recited in new claims 56-61. Moreover, neither Rostoker nor Deckert make up for these deficiencies in Brady.

In view of the foregoing, Applicants submit that all of the claims are allowable and the application is in condition for allowance. If the Examiner believes that a discussion with Applicants' attorney would be helpful, the Examiner is invited to contact the undersigned at (801) 323-5934.

Respectfully submitted,

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